

March 21, 1941

TITLE 7--AGRICULTURE

CHAPTER III--BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

PART 301--DOMESTIC QUARANTINE NOTICES

WHITE-FRINGED BEETLE

§ 301.72-5b Administrative instructions modifying the restrictions of the white-fringed beetle quarantine by authorizing alternative treatments by methyl bromide fumigation of plants in pots or in soil balls

Introductory note. The instructions in circular B. E. P. Q. 486, issued January 28, 1939, provided for treatment of balled and burlapped nursery stock by methyl bromide fumigation for larvae of the white-fringed beetle and limited the treatment to plants in 3-inch pots or in 3-inch soil balls, and provided for an exposure of 4 hours with a dosage of 1 pound of methyl bromide per 1,000 cubic feet at atmospheric pressures and a temperature of not less than 85° F. As a result of more recent investigations, the instructions are now revised to provide also that soil balls not greater than 11 inches in diameter, nor thicker than 11 inches if not spherical, may be fumigated under partial vacuum, equivalent to at least 24.5 inches of mercury, with a dosage of 4 pounds of methyl bromide per 1,000 cubic feet of chamber space, with an exposure of 1½ hours, at a minimum temperature of 75° F. These treatments are applicable to both species of the white-fringed beetle, Pantomorus leucoloma Boh. and P. peregrinus Buch.

(a) Treatments authorized. Pursuant to the authority conferred upon the Chief of the Bureau of Entomology and Plant Quarantine by subsection (a) of § 301.72-5, Chapter III, Title 7, Code of Federal Regulations (Regulation 5 of Notice of Quarantine No. 72 on account of the white-fringed beetle), the following methods of treatment for certain kinds and sizes of potted and balled and burlapped plants are hereby authorized, when carried out under the supervision of an authorized inspector of the United States Department of Agriculture.

(b) Fumigation treatment at atmospheric pressures. (1) Fumigation must be done with methyl bromide at a dosage of 1 pound per 1,000 cubic feet, including the space occupied by the plants, for a period of 4 hours, the soil masses and the air in the fumigation chamber to be at a temperature of not less than 85° F.

(2) Such fumigation shall apply only to those plants in 3-inch pots or smaller, or in soil balls not larger than those which would be contained in 3-inch pots, and the plants shall be stacked on racks so that the gas mixture can have access to all sides of the pots or the soil balls.



3 1262 09311 5136

-2-

(3) The fumigation shall be done in a tight chamber with gas-tight doors.

(4) After the chamber is loaded and closed, the appropriate amount of methyl bromide shall be volatilized therein, and the air-gas mixture shall be circulated by means of a fan or blower throughout the entire 4-hour fumigation period.

(5) The use of a fumigation chamber, lined with sheet metal throughout and with a metal-covered door closing against gaskets and held tightly in place by refrigerator door fasteners, is recommended.

(c) Fumigation treatment under partial vacuum. (1) Fumigation under a partial vacuum equivalent to at least 2 $\frac{1}{2}$.5 inches of mercury must be done with a dosage of 4 pounds of methyl bromide per 1,000 cubic feet of chamber space, including the space occupied by the commodity, with an exposure of 1 $\frac{1}{2}$ hours, the vacuum to be maintained throughout the entire period.

(2) The temperature of the soil balls shall be 75° F. or above, and the diameter of the soil balls shall be not greater than 11 inches if spherical, or thicker than 11 inches if not spherical.

(3) The fumigant-air mixture shall be circulated in the fumigation chamber by means of a fan the first 15 minutes of the exposure period to mix the vaporized fumigant thoroughly with the air in the chamber and bring it in contact with the surface of the soil balls. The soil balls shall be washed with one or more changes of air at the end of the exposure period.

(4) A standard vacuum fumigation chamber which can be closed tight and will withstand an external pressure of at least one atmosphere is required. A vacuum pump of sufficient capacity to reduce the pressure within the vacuum chamber to the equivalent of 3 inches of mercury (a 27-inch vacuum at sea level) in not more than 20 minutes is necessary.

(d) Disclaimer. In authorizing the movement of potted plants or nursery stock fumigated according to the requirements stated above, it is understood that no liability shall attach either to the United States Department of Agriculture or to any of its employees in the event of injury resulting from the use of the fumigant.

(e) Caution. Methyl bromide is a gas at ordinary temperatures. It is colorless and practically odorless in concentrations used for fumigation of plants. It is a poison, and the operator should use an approved gas mask when exposed to the gas at concentrations used in fumigation. The plants in the fumigation chamber should be well aerated by blowing air through them and the room adequately ventilated before it is entered.

This circular supersedes all instructions set forth in circular B. E. P. Q. 486 dated January 26, 1939.

AVERY S. HOYT,
Acting Chief.